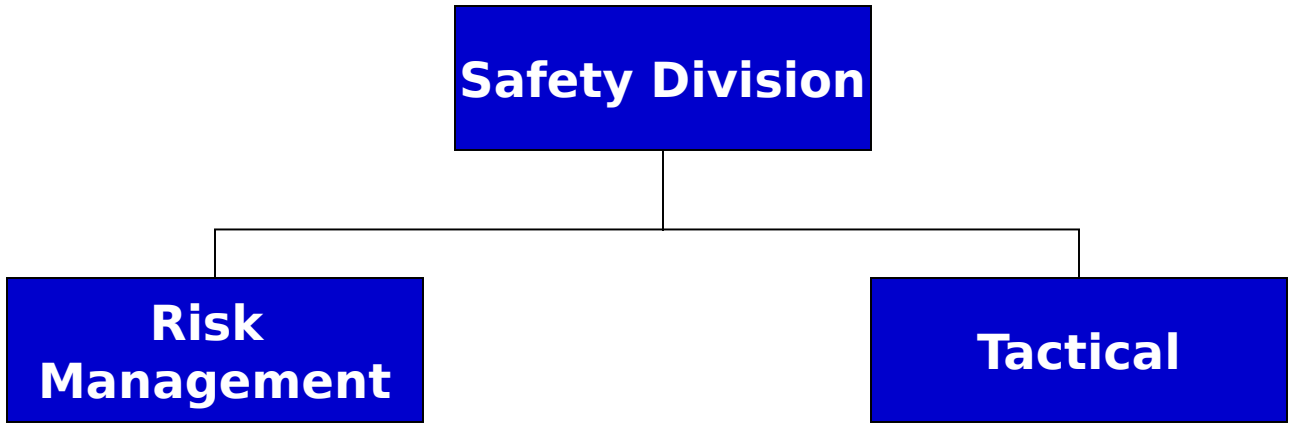
USAREUR Safety

USAREUR Safety

USAREUR Safety Structure



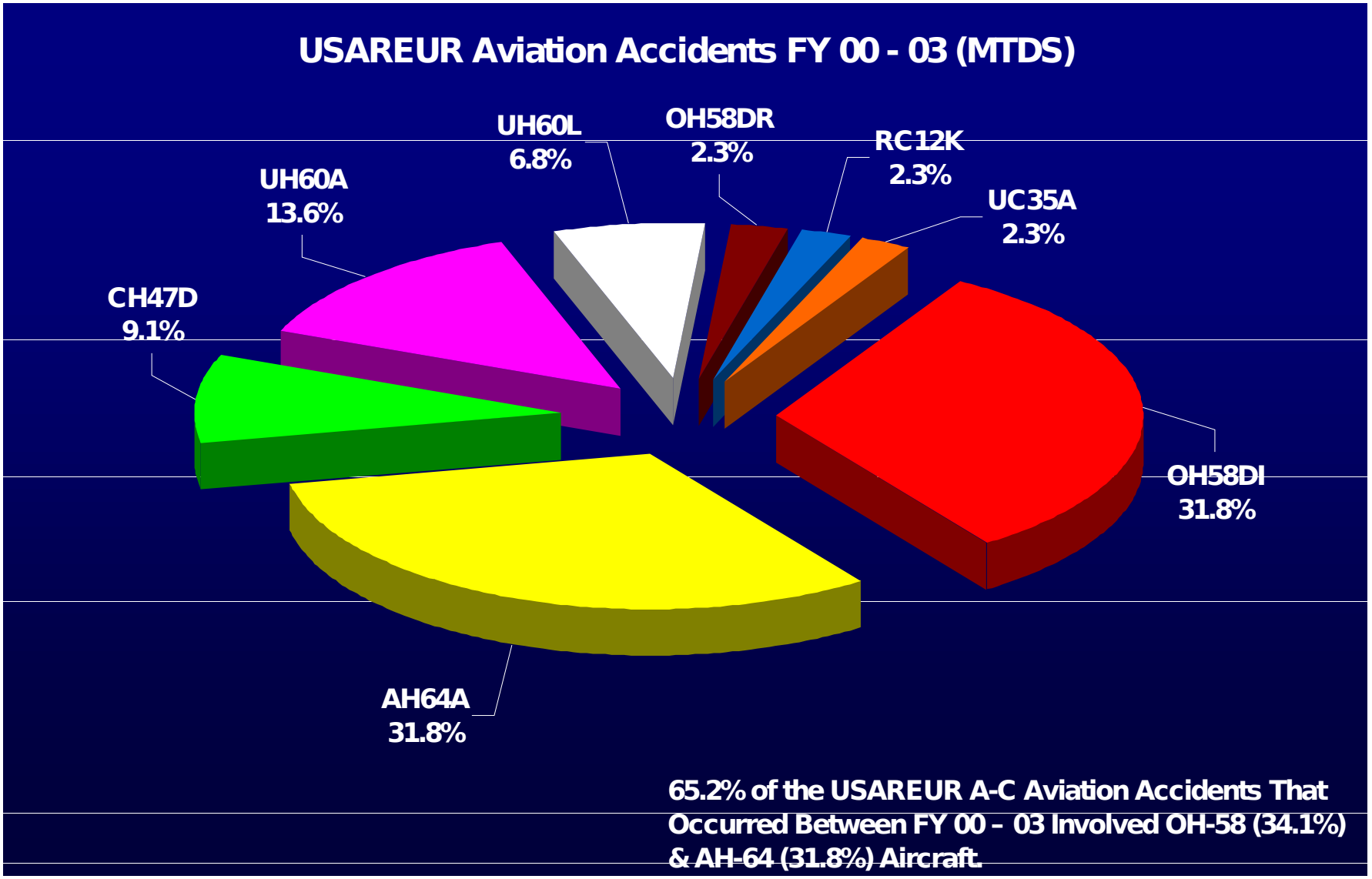
- ✓ Theater Policy / Program Oversight
- ✓ Trend Analysis
- ✓ Identification and Risk Management
- ✓ Safety Targeting Board
- ✓ Vehicle Operations
- ✓ Training:
  - ➢ Leaders
  - ➢ First Line Leaders Safety
  - ➢ Safety Officer / NCO Training
- ✓ Aviation Safety
- ✓ Tactical Operations Safety
- ✓ Systems
- ✓ Explosives
- ✓ Range
- ✓ US-GE Range Safety
- ✓ Radiation
- ✓ Hazardous Material (Training)
- ✓ DOD NATO Committee Support

Accident Cause Factors

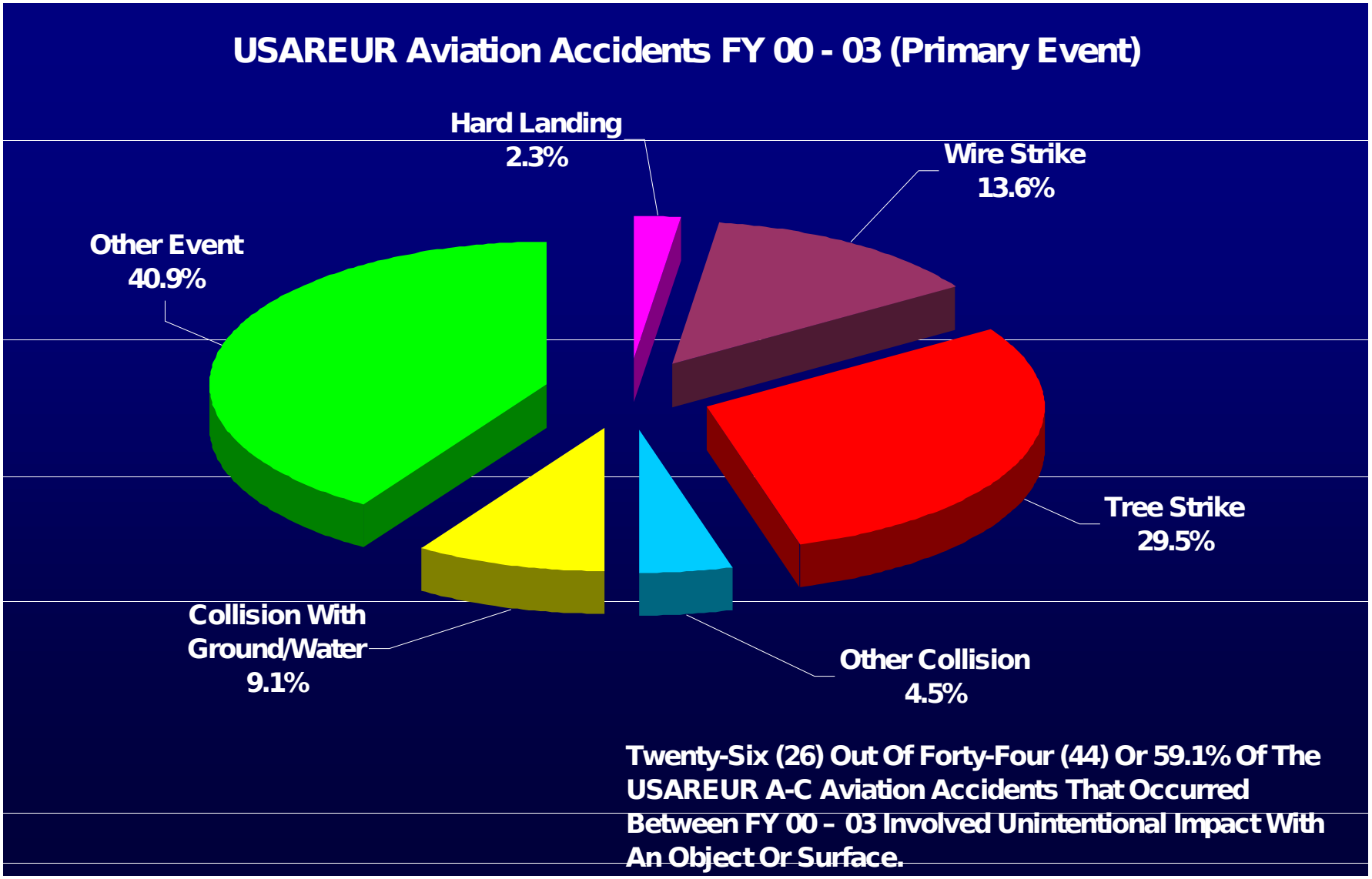
- ✓ **Materiel Failure - Malfunction = 5%**
- ✓ **Environmental Conditions = 15%**
- ✓ **Human Error = 80% <**

USAREUR

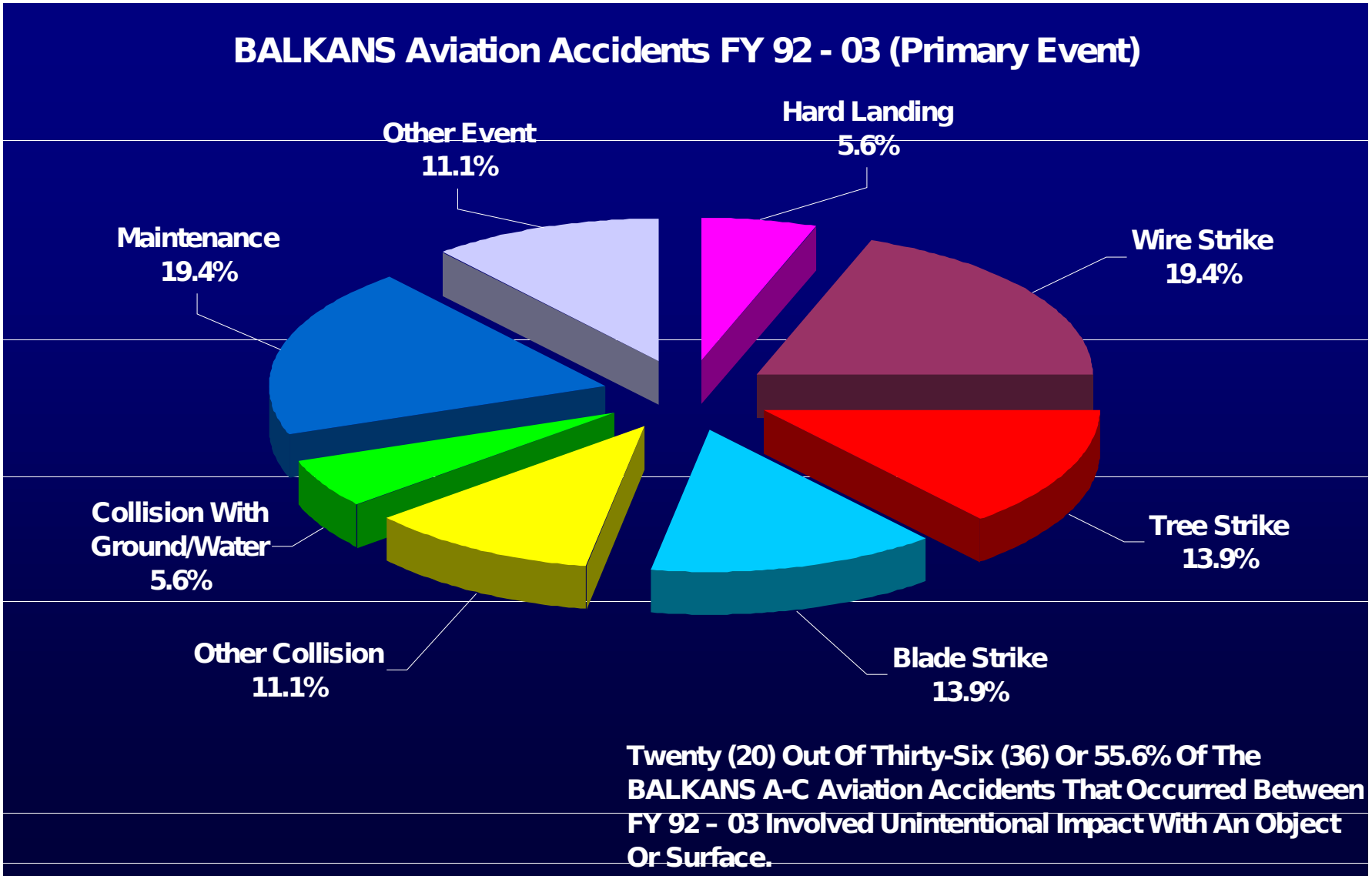
USAREUR Aviation Accidents – Class A



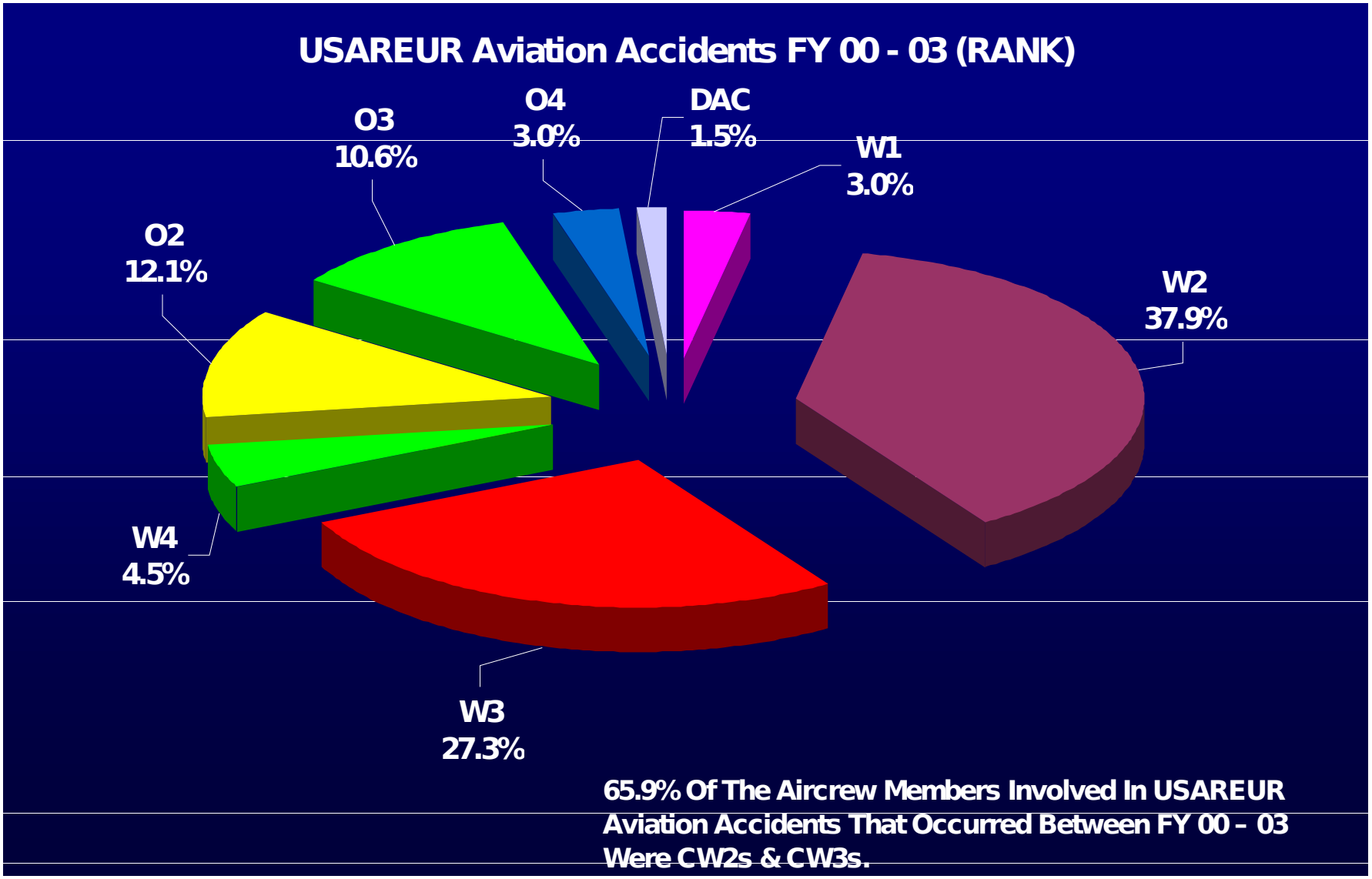
USAREUR Aviation Accidents – Class A



USAREUR Aviation Accidents – Class A

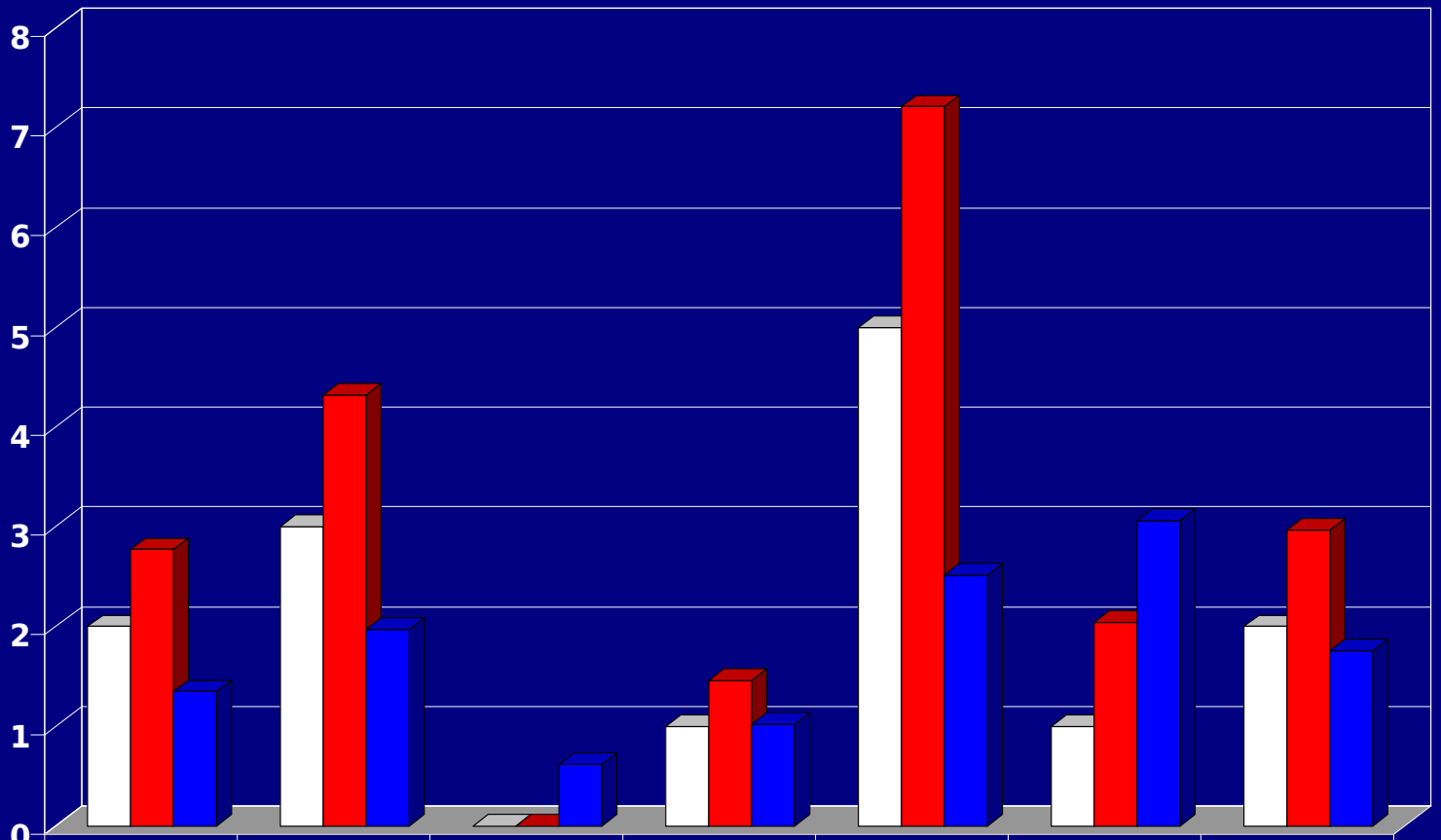

BALKANS Aviation Accidents FY 92 - 03 (Primary Event)
Other Event 11.1%
Hard Landing 5.6%
Maintenance 19.4%
Wire Strike 19.4%
Collision With Ground/Water 5.6%
Tree Strike 13.9%
Other Collision 11.1%
Blade Strike 13.9%
Twenty (20) Out Of Thirty-Six (36) Or 55.6% Of The BALKANS A-C Aviation Accidents That Occurred Between FY 92 – 03 Involved Unintentional Impact With An Object Or Surface.

USAREUR Aviation Accidents – Class A



USAREUR Aviation Accidents – Class A

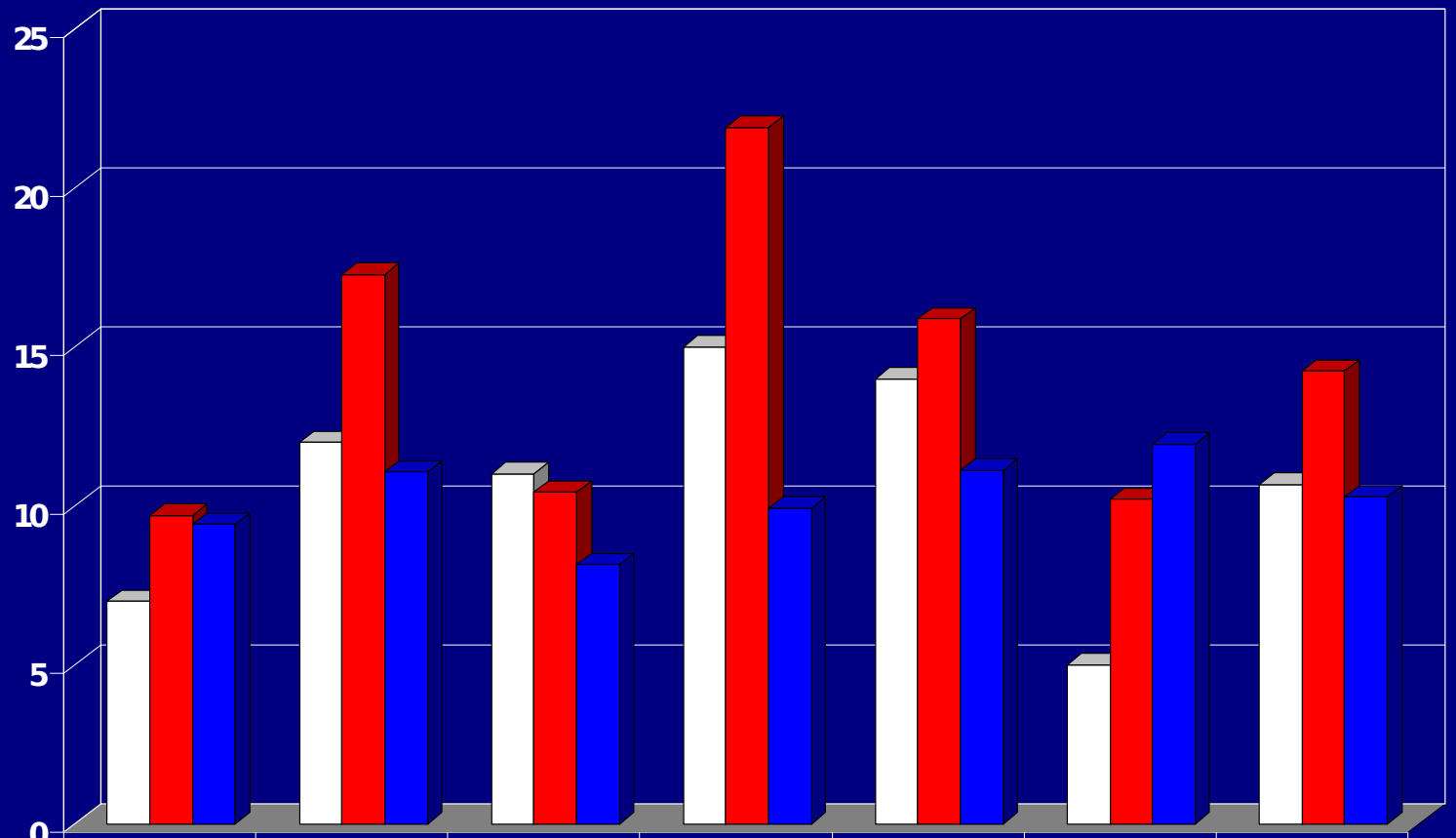
USAREUR AVIATION CLASS A AVIATION ACCIDENTS FY 98 - FY 03



	FY 98	FY 99	FY 00	FY 01	FY 02	FY 03	6YR AVG
U'R Class A	2	3	0	1	5	1	2
U'R A Rate	2.77	4.32	0.00	1.46	7.21	2.04	2.97
DA A Rate	1.35	1.97	0.62	1.02	2.51	3.06	1.76

USAREUR Aviation Accidents – Class A

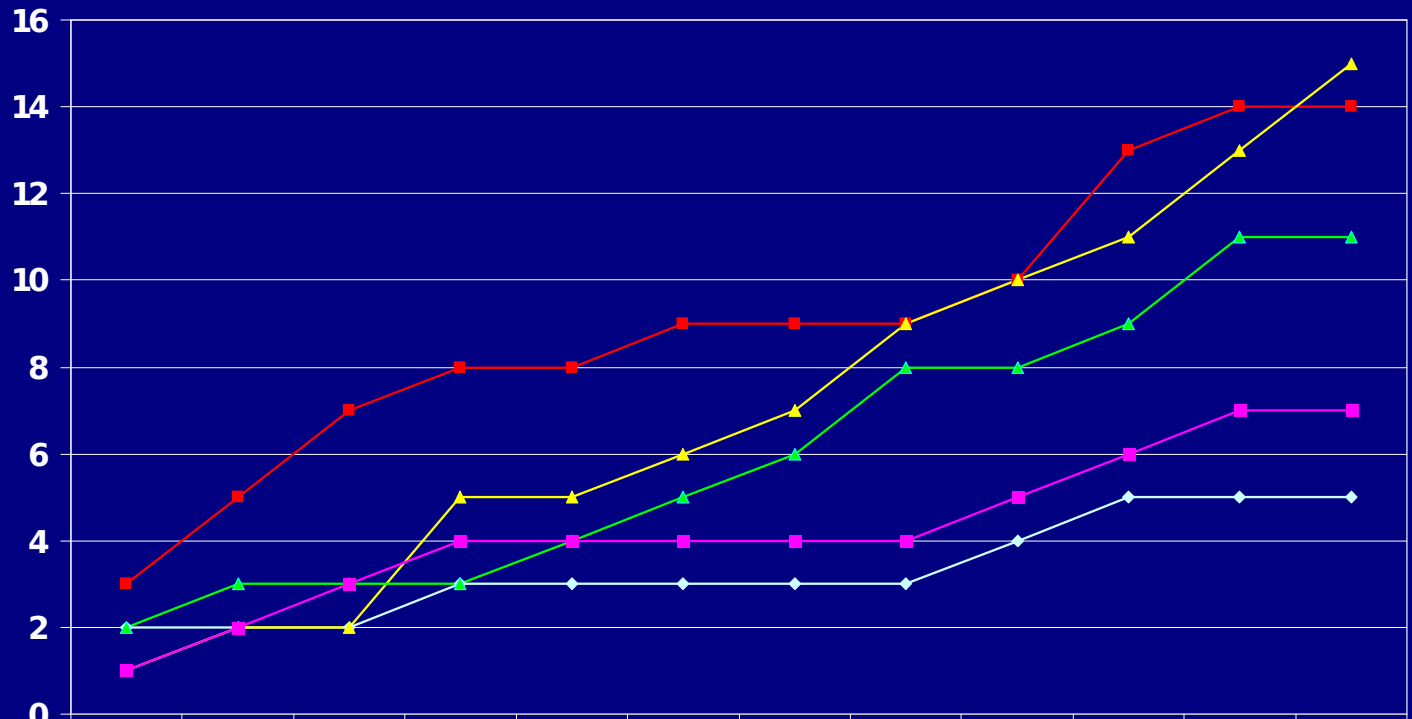
USAREUR AVIATION CLASS A-C AVIATION ACCIDENTS FY 98 - FY 03



	FY 98	FY 99	FY 00	FY 01	FY 02	FY 03	6YR AVG
U'R Class A-C	7	12	11	15	14	5	11
U'R A-C Rate	9.70	17.27	10.42	21.90	15.87	10.20	14.23
DA A-C Rate	9.43	11.07	8.15	9.92	11.12	11.93	10.27

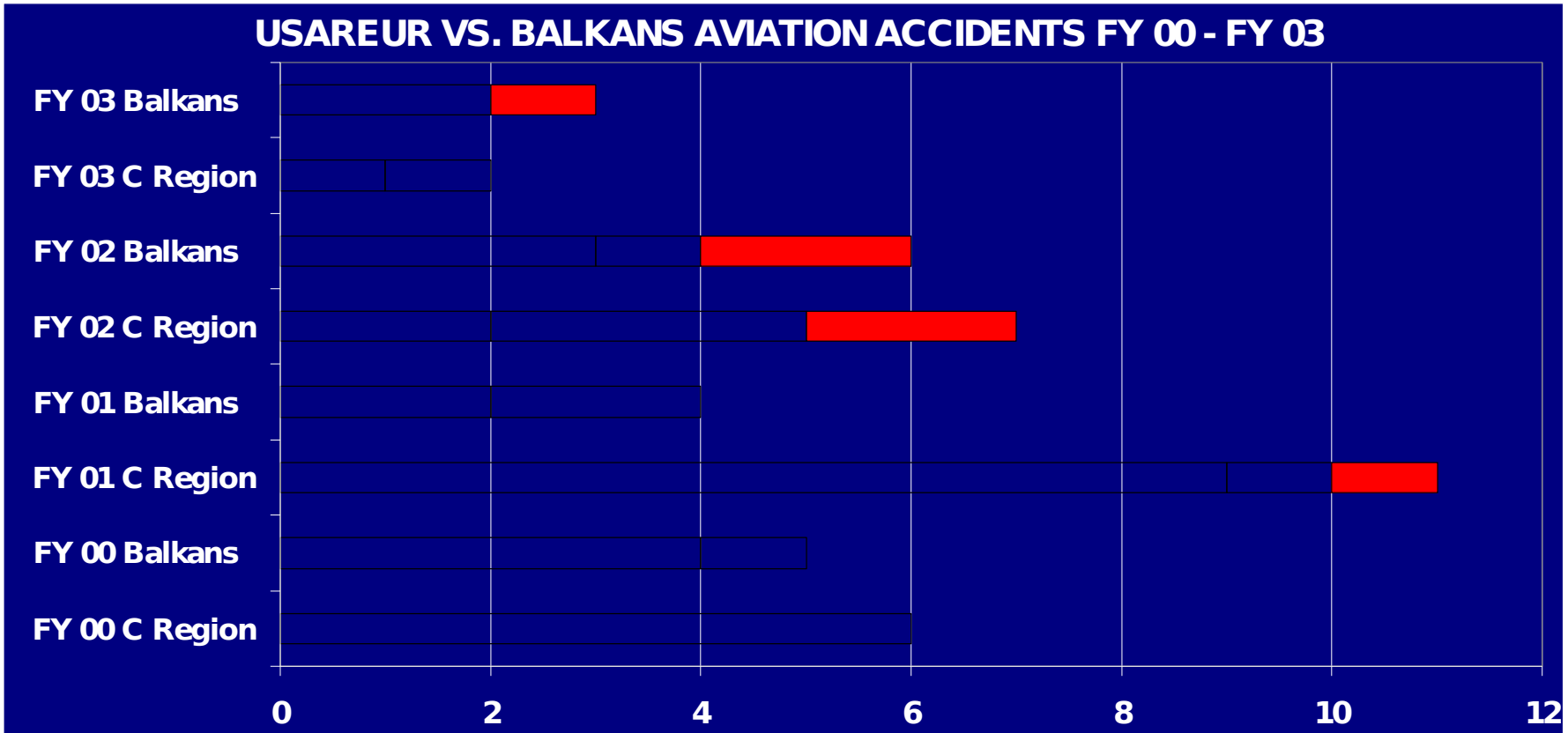
USAREUR Aviation Accidents – Class A

USAREUR CLASS A-C AVIATION ACCIDENTS FY 00 - FY 03
(MONTHLY BREAKDOWN CUMULATIVE)



	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
USAREUR FY 03	2	2	2	3	3	3	3	3	4	5	5	5
USAREUR FY 02	3	5	7	8	8	9	9	9	10	13	14	14
USAREUR FY 01	1	2	2	5	5	6	7	9	10	11	13	15
USAREUR FY 00	2	3	3	3	4	5	6	8	8	9	11	11
50% Reduction (FY 03)	1	2	3	4	4	4	4	4	5	6	7	7

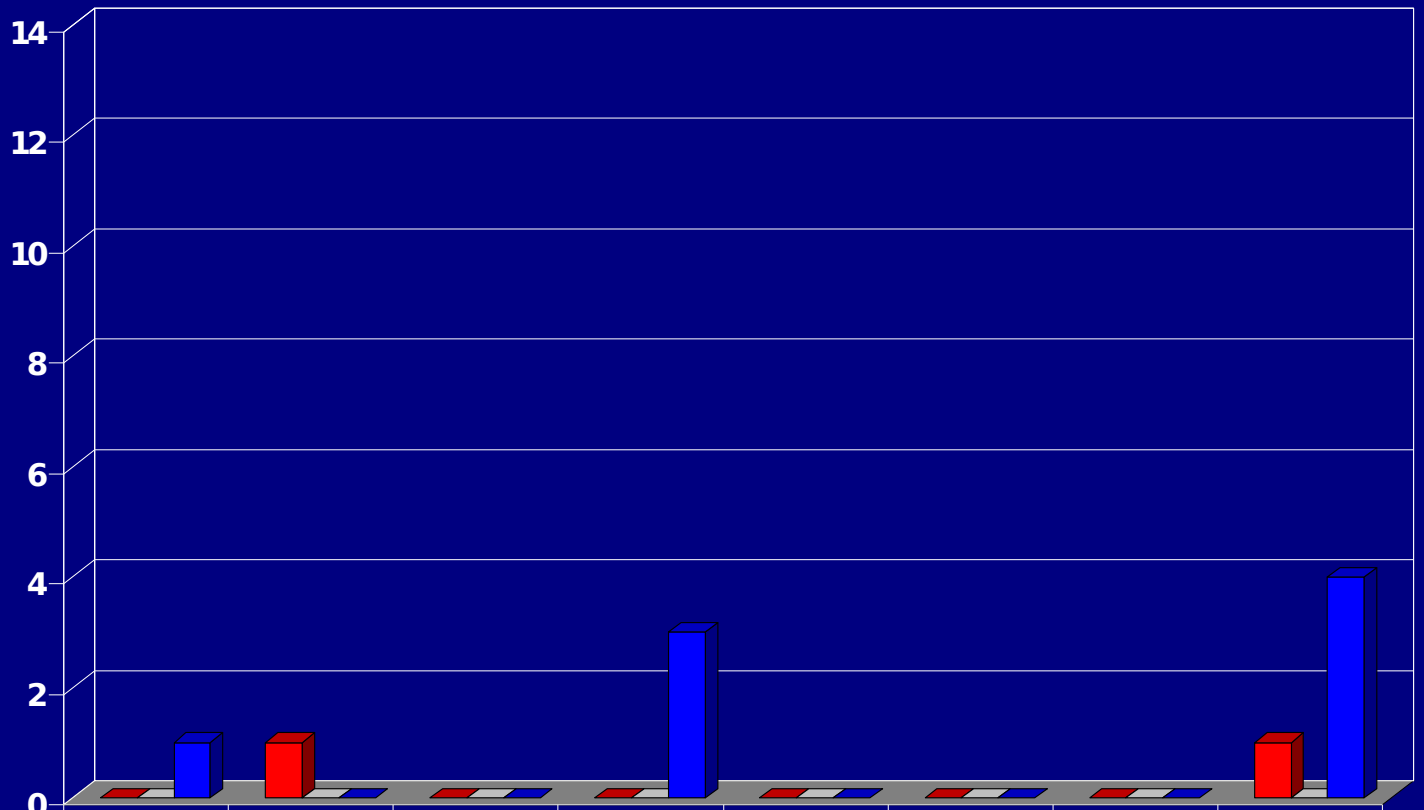
USAREUR Aviation Accidents – Class A



	FY 00 C Region	FY 00 Balkans	FY 01 C Region	FY 01 Balkans	FY 02 C Region	FY 02 Balkans	FY 03 C Region	FY 03 Balkans
Class A	0	0	1	0	2	2	0	1
Class B	0	1	1	2	3	1	1	0
Class C	6	4	9	2	2	3	1	2

SFOR – 13 UPDATE

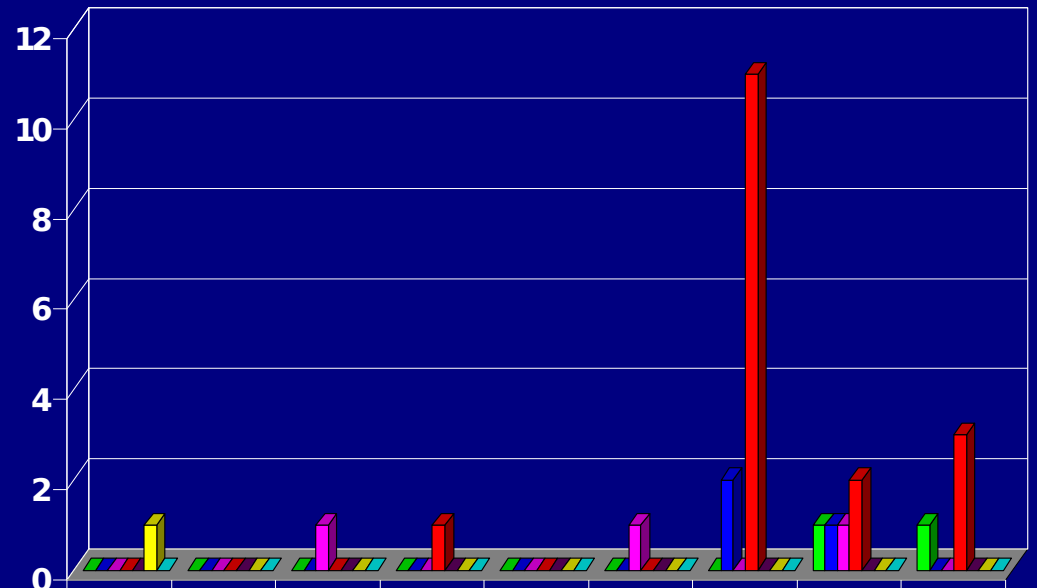
RECORDABLE ACCIDENTS SFOR - 13



	GND	ACV	NTV	PERS INJ	EXPL/ FIRE	AVN	AVN GND	TOTAL
CLASS A	0	1	0	0	0	0	0	1
CLASS B	0	0	0	0	0	0	0	0
CLASS C	1	0	0	3	0	0	0	4

SFOR – 13 UPDATE

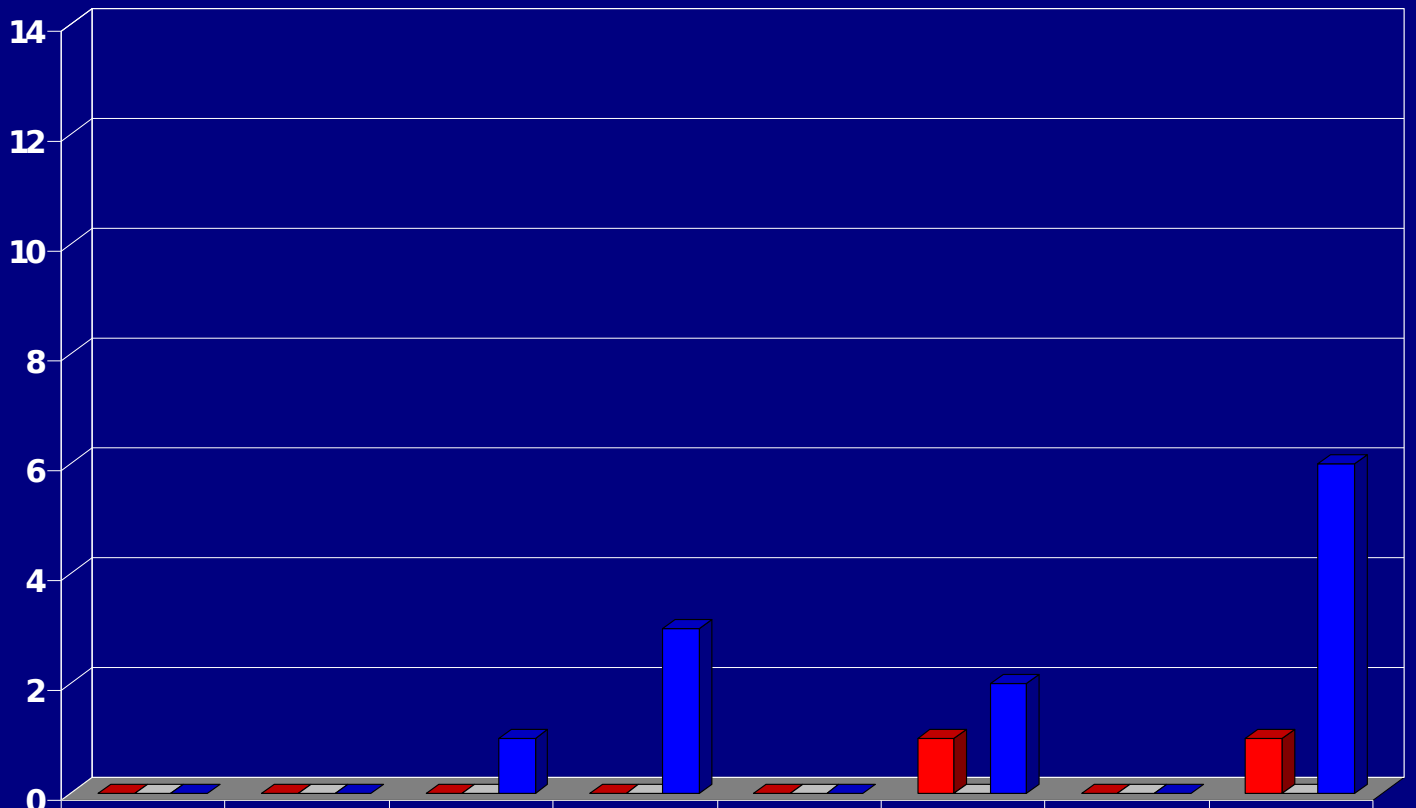
RECORDABLE ACCIDENTS SFOR 11 - 12 - 13



	SFOR Class A			SFOR Class B			SFOR Class C		
	11	12	13	11	12	13	11	12	13
GND	0	0	0	0	0	0	0	1	1
ACV	0	0	0	0	0	0	2	1	0
NTV	0	0	1	0	0	1	0	1	0
PERS INJ	0	0	0	1	0	0	11	2	3
EXPL/FIRE	0	0	0	0	0	0	0	0	0
AVN	1	0	0	0	0	0	0	0	0
AVN GND	0	0	0	0	0	0	0	0	0

KFOR 9 – 4B UPDATE

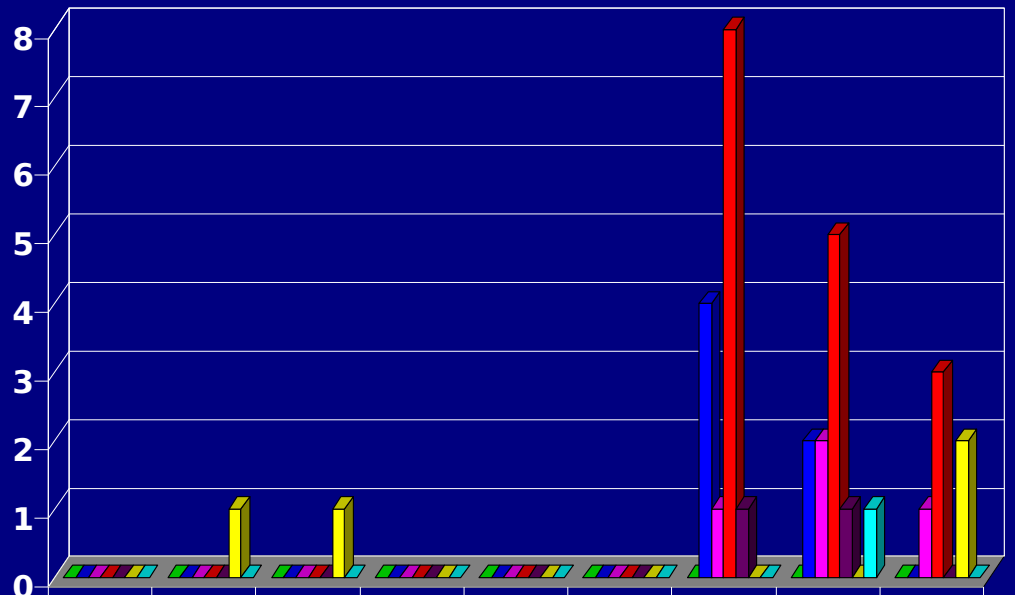
RECORDABLE ACCIDENTS KFOR - 4B



	GND	ACV	NTV	PERS INJ	EXPL/ FIRE	AVN	AVN GND	TOTAL
CLASS A	0	0	0	0	0	1	0	1
CLASS B	0	0	0	0	0	0	0	0
CLASS C	0	0	1	3	0	2	0	6

KFOR 3 – 4B UPDATE

RECORDABLE ACCIDENTS KFOR 3B - 4A - 4B



	KFOR Class A			KFOR Class B			KFOR Class C		
GND	0	0	0	0	0	0	0	0	0
ACV	0	0	0	0	0	0	4	2	0
NTV	0	0	0	0	0	0	1	2	1
PERS INJ	0	0	0	0	0	0	8	5	3
EXPL/FIRE	0	0	0	0	0	0	1	1	0
AVN	0	1	1	0	0	0	0	0	2
AVN GND	0	0	0	0	0	0	0	1	0

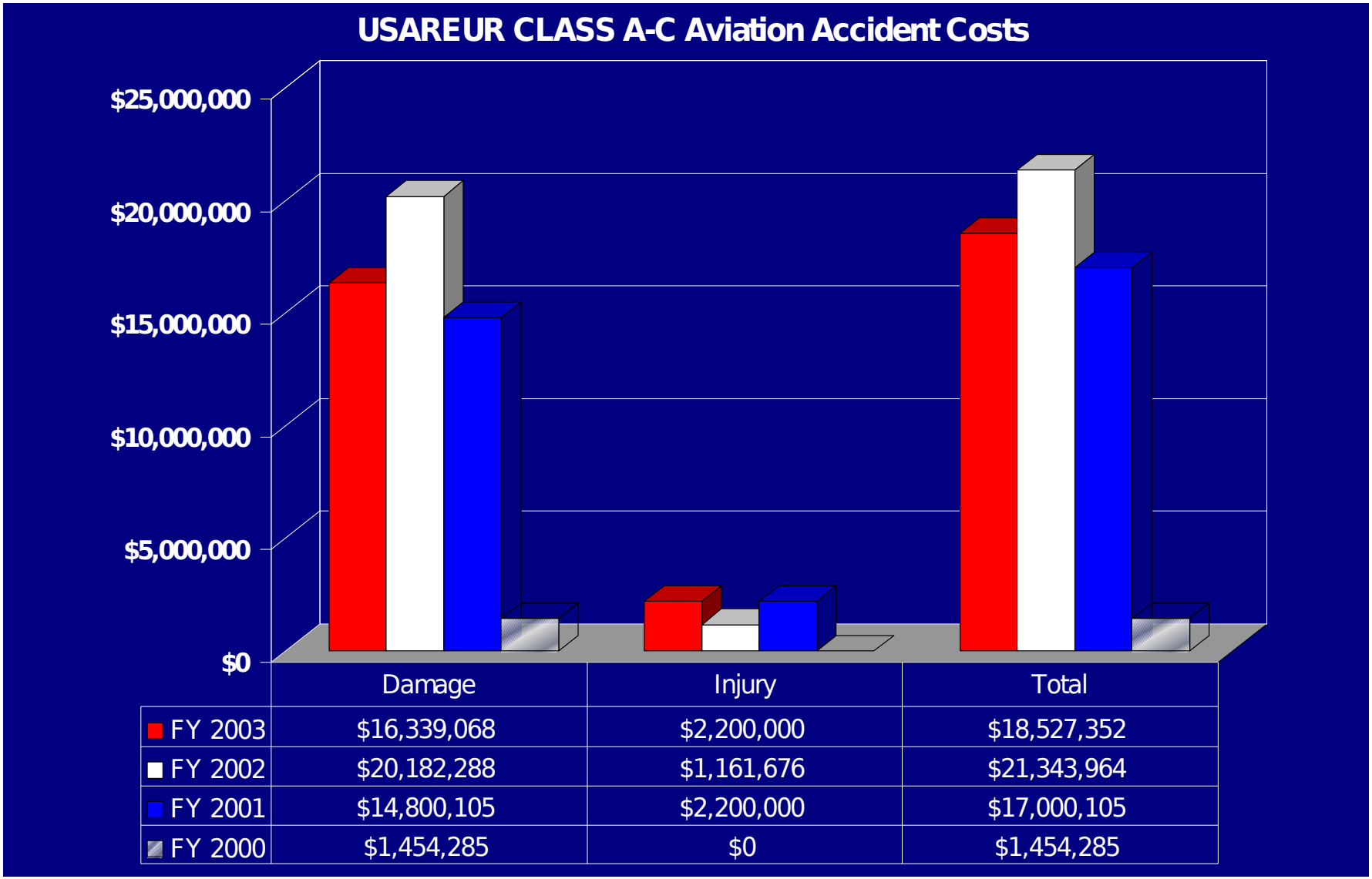
USAREUR Aviation Accidents Statistics

USAREUR Aviation Accident Rates per 100,000 Hours (Flight Accidents)								
	Accident(s) Rate					Percent Comparisons		
	Monday, September 15, 2003							
Accident Category	FY2003	FY2002	FY2001	FY2000	3-Yr Avg	FY2003 vs. FY2002	FY2002 vs. FY2001	FY2003 vs. 3 Yr Avg
Flight Class A	2.041	7.213	1.460	0.000	2.891	-71.71%	394.14%	-29.40%
Flight Class B	2.041	5.770	4.379	0.000	3.383	-64.63%	31.77%	-39.68%
Flight Class C	6.122	4.328	16.057	10.422	10.269	41.47%	-73.05%	-40.38%
Total Aviation (Class A-C)	10.204	17.311	21.896	10.422	16.543	-41.05%	-20.94%	-38.32%

DA Aviation Accident Rates per 100,000 Hours (Flight Accidents)								
	Accident(s) Rate					Percent Comparisons		
	Monday, September 15, 2003							
Accident Category	FY2003	FY2002	FY2001	FY2000	3-Yr Avg	FY2003 vs. FY2002	FY2002 vs. FY2001	FY2003 vs. 3 Yr Avg
Flight Class A	3.052	2.515	1.022	0.619	1.385	21.35%	146.09%	120.31%
Flight Class B	1.895	1.257	1.431	0.413	1.034	50.76%	-12.16%	83.33%
Flight Class C	6.947	7.350	7.464	7.123	7.312	-5.48%	-1.53%	-5.00%
Total Aviation (Class A-C)	11.894	11.251	9.861	8.350	9.731	5.72%	14.10%	22.22%

USAREUR vs. DA Aviation Accident Rates per 100,000 Hours (Flight Accidents)						
	Accident(s) Rate				Percent Comparisons	
	Wednesday, September 03, 2003					
Accident Category	U'R FY2003	DA FY2003	U'R FY2002	DA FY2002	U'R vs. DA FY 03	U'R vs. DA FY 02
Flight Class A	2.041	3.052	7.213	2.515	-33.13%	186.80%
Flight Class B	2.041	1.895	5.770	1.257	7.69%	359.06%
Flight Class C	6.122	6.947	4.328	7.350	-11.87%	-41.12%
Total Flight (Class A-C)	10.204	11.894	17.311	11.251	-14.21%	53.86%

USAREUR Aviation Accidents – Class A



	Damage	Injury	Total
FY 2003	$16,339,068	$2,200,000	$18,527,352
FY 2002	$20,182,288	$1,161,676	$21,343,964
FY 2001	$14,800,105	$2,200,000	$17,000,105
FY 2000	$1,454,285	$0	$1,454,285

Class A Aviation Accidents FY - 02

- During FY 02, there were 5 Class A Aviation Accidents that occurred in USAREUR (CR & Balkans), which resulted in 1 fatality, 5 destroyed aircraft, and $19,849,474.00 in total costs. All involved individual or leader failure (Human Error).

Class A Aviation Accidents FY - 02

DESCRIPTION: On 09 Oct 01, during Operation Victory Strike in Poland, an AH-64A aircraft conducting a night tactical mission impacted the trees and crashed.

CAUSE: 1) Human Error - Training Failure: Failure to use proper crew coordination, which left no one flying the aircraft. 2) Human Error - Individual Error: IP failed to maintain situational awareness due to overconfidence in his ability to perform both IP duties and copilot/gunner (CPG) duties while executing a demanding night tactical mission. 3) Human Error - Individual Error and Training Failure: Inadequate mission planning and risk management. Haste, lack of attention to detail, and a generally low experience level caused the Troop commander to allow a Readiness Level (RL) 3 aviator, undergoing refresher training to participate in a complex mission, which overtaxed the IP and led to a crew coordination error.

EFFECT: The aircraft was destroyed, the Instructor Plot (IP) was fatally injured, and the Pilot (PI) received minor injuries.

Class A Aviation Accidents FY - 02

DESCRIPTION: On 10 Dec 01, during a day Readiness Level (RL) 1 evaluation flight in Budingen, Germany, an OH-58DI aircraft pitched nose up, rolled to the left, struck the ground, rebounded, rolled to the right, and came to rest on its right side.

CAUSE: Human Error – Individual Error and Standards Failure: IP complacency and failure to follow the aircraft checklist during the preflight, run-up, and before-takeoff checks resulted in the copilot (CPO) cyclic being disengaged i.e., it was mechanically disconnected from the flight control system and locked in a fixed center position. The IP, seated at the copilot station, took the flight controls at a hover, lost control, and crashed.

EFFECT: The aircraft was destroyed and both crewmembers received minor injuries.

Class A Aviation Accidents FY - 02

DESCRIPTION: On 04 Jun 02, while performing a day, nap-of-the-earth (NOE) training flight in the vicinity of Eagle Base, Bosnia-Herzegovina, an OH-58DR aircraft, which was 800 meters off the NOE route, contacted wires, landed hard, and rolled over on the right side.

CAUSE: 1) Human Error – Individual Error: The aircrew failed to accomplish the tasks navigate by pilotage and dead reckoning, and perform terrain flight to standard, which resulted in an unexpected encounter with the wire obstacles. 2) Human Error - Individual Error: Aircrew failed to utilize the 1:50,000 map located in the cockpit with wire hazards posted IAW TF Eagle Aviation Procedures Guide, which is required for navigation below 300’ Above Ground Level (AGL).

EFFECT: The aircraft was destroyed and both crewmembers received minor injuries.

Class A Aviation Accidents FY - 02

DESCRIPTION: On 06 Jul 02, while decelerating during a night fast-roping mission on Camp Bondsteel, Serbia, the tail section of a CH-47D aircraft contacted the ground.

CAUSE: 1) Human Error - Training Failure: Failure to ensure aircrew was properly trained and current in fast-rope operations. 2) Human Error - Individual Error: IP failed to maintain situational awareness due to overconfidence in his ability to perform the mission and train the aircrew. 3) Human Error - Individual Error and Training Failure: Inadequate mission briefing risk assessment, which would have identified the mission as “high risk” as required by home station mission briefing sheet.

EFFECT: The aircraft’s landing gear, ramp, main rotor system, and fuselage were extensively damaged during the incident.

Class A-C Aviation Accidents FY - 03

- As of 8 July 2003, USAREUR has experienced 5 Class A-C Aviation Accidents, which have resulted in 2 fatalities and $18,527,352 in total costs. All involved individual or leader failure (Human Error).

USAREUR Aviation Accidents – FY 03

DESCRIPTION: On 7 Oct 02, at approximately 1400 hours, an AH-64 aircraft was performing evasive maneuvers during in-flight training. The aircraft flight controls were manipulated in such a manner as to result in the main rotor blades flapping down and striking the Pilot Night Vision System (PNVS) in flight.

CAUSE: Investigation ongoing.

EFFECT: The PNVS was damaged and 2 blades were damaged, which will probably amount to more than $200,000. No other damage or injuries. Aircraft remained controllable and landed without further incident.

USAREUR Aviation Accidents – FY 03

USAREUR Aviation Accidents – FY 03

USAREUR Aviation Accidents – FY 03

USAREUR Aviation Accidents – FY 03

USAREUR Aviation Accidents – FY 03

DESCRIPTION: On 30 Oct 02, at approximately 2000 hours, an UH-60A was conducting training at an airfield. The aircraft experienced damage as a result of a high rate of descent landing being demonstrated by the Pilot-in-Command.

CAUSE: Investigation ongoing.

EFFECT: The PLS antenna struck the runway and was and driven into the belly of the aircraft, which pushed the radio equipment under the right pilot seat up several inches and caused substantial sheet metal damage. Both wire strike cutters on the main landing gear were broken. The search light was broken and pushed into the underside of the aircraft. Suspect structural damage to the airframe in the immediate area of the antenna.

USAREUR Aviation Accidents – FY 03

USAREUR Aviation Accidents – FY 03

USAREUR Aviation Accidents – FY 03

USAREUR Aviation Accidents – FY 03

USAREUR Aviation Accidents – FY 03

DESCRIPTION: On 15 Jan 03, between 1600 and 1921 hours, an AH-64A providing security and over watch to an air movement into OP Thunder contacted an object with the tail rotor, probably a tree limb. The crew never felt any unusual vibration in the controls. The damage was found the following day when the aircraft was brought in for routine maintenance.

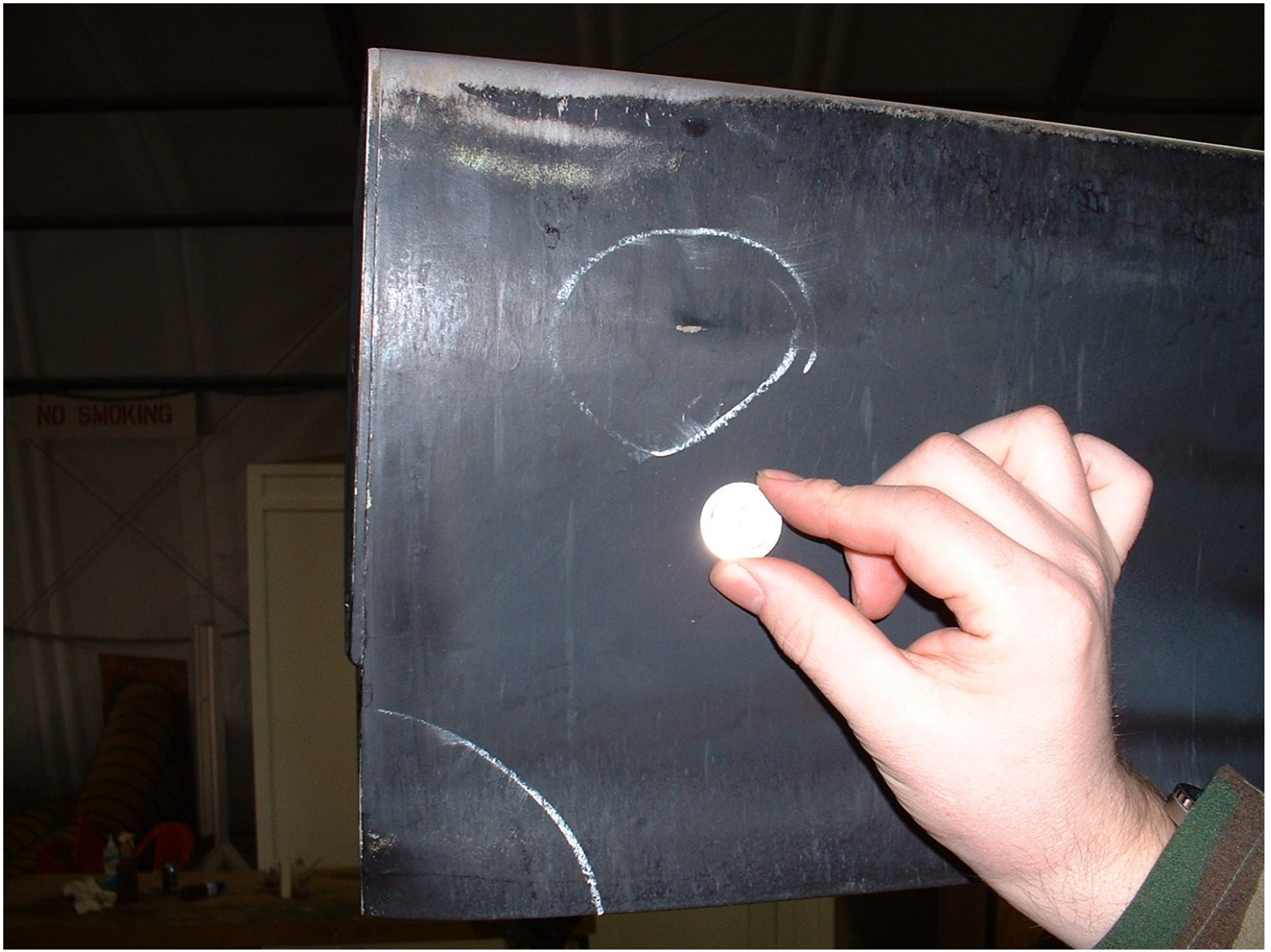
CAUSE: Investigation ongoing.

EFFECT: Damage was found on all four T/R paddles and one T/R paddle tip cap. The cost of damage is estimated at $87,352.

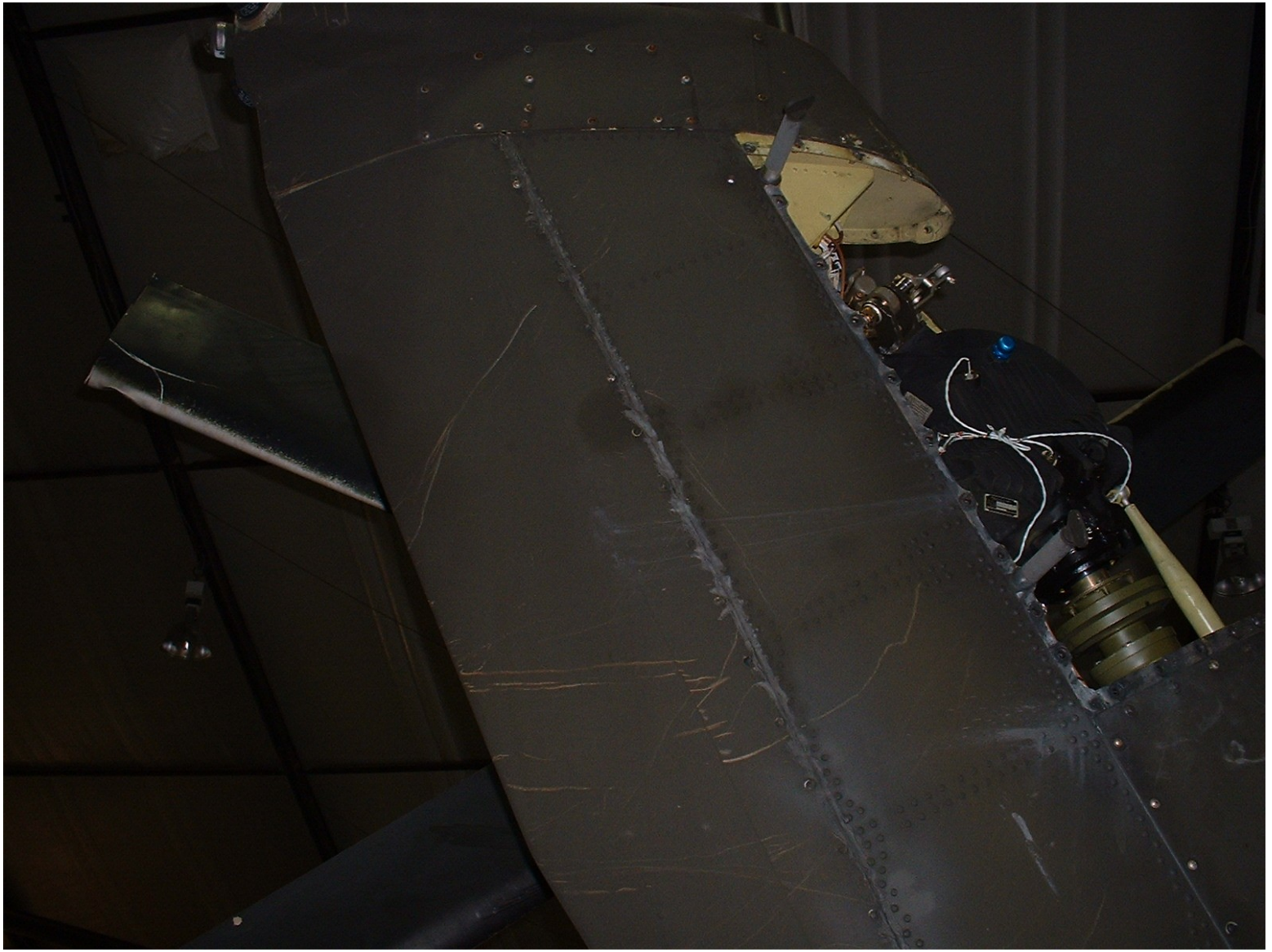
USAREUR Aviation Accidents – FY 03

USAREUR Aviation Accidents – FY 03

USAREUR Aviation Accidents – FY 03



USAREUR Aviation Accidents – FY 03



USAREUR Aviation Accidents – FY 02

DESCRIPTION: On 12 Aug 02 at approximately 2228 hours, an AH-64A aircraft crashed during a multi-ship night training mission. The aircraft was maneuvering to occupy a battle position when it struck something, impacted the hillside, and came to rest on it's side. The aircraft broke into three sections during the crash sequence.

CAUSE: Investigation ongoing.

EFFECT: The aircraft was completely destroyed. Both pilots sustained minor scrapes and bruises; one had a broken thumb. The cost of damage is estimated at $1,000,000+.

USAREUR Aviation Accidents – FY 02

USAREUR Aviation Accidents – FY 02

USAREUR Aviation Accidents – FY 02

USAREUR Aviation Accidents – FY 02

USAREUR Aviation Accidents – FY 03

DESCRIPTION: On 8 Jun 03 at 0118 hours, an AH-64A aircraft impacted 3 of 4 mining cables suspended at 156’ AGL while conducting a Reconnaissance and Surveillance mission (R & S) of a Named Area of Interest (NAI) destroying the main rotor blades. The aircraft developed an uncontrollable right yawing motion and crashed 162’ South of the initial impact. The aircraft was completely destroyed in a post-crash fire and both crewmembers received fatal injuries.

CAUSE: Investigation ongoing.

EFFECT: The aircraft was completely destroyed. Both pilots sustained fatal injuries during the crash sequence. The total cost of damage and injury is estimated at $18,200,000.

USAREUR Aviation Accidents – FY 03

USAREUR Aviation Accidents – FY 03

USAREUR Aviation Accidents – FY 03

USAREUR Aviation Accidents – FY 03

USAREUR Aviation Accidents – FY 03

USAREUR Aviation Accidents – FY 03

USAREUR Aviation Accidents – FY 03

DESCRIPTION: On 7 Jul 03 at 2245 hours, a UH-60A experienced an in-flight blade strike while conducting low-level flight training under NVGs. The crew was on an approved NOE training route. Apparently, on climb-out from a confined area the main rotor blades struck a tree limb while attempting to avoid other vegetation. The aircraft was flown back to Base and during post-flight inspection, damage was discovered on three of the main rotor tip caps.

CAUSE: Investigation ongoing.

EFFECT: Three of four main rotor tip caps were damaged with an ECOD of $31,716. There were no injuries.

Balkans Aviation Safety Issues

- **Procedures**
  - Aviation Procedures Guide (APG)
  - Hard Deck (Mission Vs. Training)
  - ATM, SOP, -10, Checklist, etc…
- **Hazards**
  - Environment (Mountains & WX)
  - Obstructions (Trees & Wires)
  - Blade Strikes (Objects Vs. M/R & T/R; M/R & T/R Vs. Objects)
  - Maintenance (Towing)
- **Airfields & FARPS**
  - Parking – HESCO/Berms
  - Weapons/Ammunition – Loading/Unloading/Storage

Conclusion & Challenges

- **Reporting & Analysis**
  - Accurate Reporting & Data Collection (Challenge)
  - Trend Analysis (Accident Causal Factors)
  - Target Prevention Measures (Proactive & Preventative)
- **Human Error (Leadership & Individual Failure)**
  - Identify Trends & Systemic Problems (Challenge)
  - Develop Reduction Methods
  - Target Risk Takers – Intervention
  - Ownership (Accountability & Direct Oversight)
  - Command Emphasis & Support
- **Lessons Learned**
  - Collect, Evaluate, and Apply Lessons Learned

Questions & Comments?

CW5 Larry C. Bugg
USAREUR Aviation Safety Officer

Civilian: 06221-57-8084
Civilian Fax: 06221-57-6102
DSN: 370-8084
DSN Fax: 370-6102
Cell: 0175-747-0700 / 0171-414-0852
Email:
larry.bugg@hq.hqusareur.army.mil

Mailing Address

HQ, USAREUR
CMR 420, BOX 396
APO AE 09063